

What is claimed is:

1. A header assembly for connecting an implantable
medical device to a conductor terminating at a body
organ intended to be assisted by the medical device, the
5 header assembly comprising:

(a) a housing for the medical device, the housing
comprising control circuitry, at least one electrical
energy storage device, and at least one feedthrough wire
extending from the control circuitry and through a wall
10 of the housing;

(b) a terminal positioned outside the housing and
connected to a distal end of the feedthrough wire,
wherein the terminal is directly connectable to a lead
for the conductor;

15 (c) a seal electrically insulating the feedthrough
wire from the wall of the housing; and

(d) a body secured to the wall of the housing and
supporting the terminal for connecting to the lead.

2. A header assembly for connecting an implantable
20 medical device to a conductor terminating at a body
organ intended to be assisted by the medical device, the
header assembly comprising:

(a) a housing for the medical device, the housing
comprising control circuitry, at least one electrical
25 energy storage device and at least a first and a second

feedthrough wires extending from the control circuitry
and through a wall of the housing;

(b) a first terminal positioned outside the
housing and connected to a first distal end of the first
5 feedthrough wire, wherein the first terminal includes a
first lead opening;

(c) a second terminal positioned outside the
housing and connected to a second distal end of the
second feedthrough wire, wherein the second terminal
10 includes a second lead opening, and wherein the first
and second lead openings of the first and second
terminals are aligned in a first co-axial relationship;

(d) a seal electrically insulating the first and
second feedthrough wires from the wall of the housing;
15 and

(e) a body secured to the wall of the housing and
supporting the first and second terminals with a first
bore communicating from outside the body to the first
and second lead openings in the first co-axial
20 relationship.

3. The header assembly of claim 2 wherein the housing
has third and fourth feedthrough wires extending from
the control circuitry and through the wall of the
housing to respective third and fourth terminals having
25 third and fourth lead openings aligned in a second co-

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axial relationship along a second bore communicating from outside the body to the third and fourth terminals.

4. The header assembly of claim 3 wherein the first co-axial relationship of the first and second lead openings along the first bore is offset with respect to the second co-axial relationship of the third and fourth lead openings aligned along the second bore.
5. The header assembly of claim 2 wherein the body is of a polymeric material.
- 10 6. The header assembly of claim 2 wherein the body is secured to the wall of the housing by encasing anchors extending therefrom.
7. The header assembly of claim 2 wherein the wall of the housing is a lid.
- 15 8. The header assembly of claim 2 wherein the housing for the medical device comprises mating first and second clam shells closed by a lid.
9. The header assembly of claim 2 wherein the first and second terminals include first and second apertures.
- 20 10. The header assembly of claim 9 wherein a threaded member is receivable in the first and second apertures of the respective first and second terminals.
11. The header assembly of claim 9 wherein the body includes first and second passageways in communication

with first and second apertures in the respective first and second terminals.

12. The header assembly of claim 2 wherein the first bore is sized to receive a lead of the conductor in the first and second lead openings of the first and second terminals.

13. The header assembly of claim 2 wherein the first bore includes an annular channel supporting an O-ring for sealing about a lead of the conductor received in the first and second terminals.

14. The header assembly of claim 2 wherein the electrical energy storage device is selected from a battery and a capacitor.

15. The header assembly of claim 2 wherein the medical device is selected from the group consisting of a hearing assist device, neurostimulator, cardiac pacemaker, drug pump and cardiac defibrillator.

16. The header of claim 2 wherein the first and second terminals are selected from the group consisting of a terminal block, a sleeve, a ring-shaped member supporting a coil spring and a ring shaped member supporting at least one leaf spring.

17. A method for connecting an implantable medical device to a conductor terminating at a body organ

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intended to be assisted by the medical device,
comprising the steps of:

5 (a) providing the medical device having a housing
containing control circuitry, at least one electrical
energy storage device and at least one feedthrough wire
extending from the control circuitry through a wall of
the housing to a distal end located outside the housing;

10 (b) connecting the distal end of the feedthrough
wire to a terminal connectable to a lead of the
conductor; and

(c) molding a body of polymeric material secured
to the wall of the housing with the body supporting the
terminal.

15 18. A method for connecting an implantable medical
device to a conductor terminating at a body organ
intended to be assisted by the medical device,
comprising the steps of:

20 (a) providing the medical device having a housing
containing control circuitry, at least one electrical
energy storage device and at least a first and a second
feedthrough wires extending from the control circuitry
through a wall of the housing to first and second distal
ends located outside the housing;

25 (b) connecting the first and second distal ends of
the first and second feedthrough wires to respective

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Parameter	Value
Age	25.0
Sex	Male
Height	1.75
Weight	70.0
Heart rate	72.0
Stroke volume	70.0
Cardiac output	5.0
Systemic pressure	120/80
Pulmonary pressure	25/15
Pulmonary flow	5.0
Arterial oxygen saturation	98%
Mixed venous oxygen saturation	75%
Arterial oxygen tension	100 mmHg
Mixed venous oxygen tension	40 mmHg
Arterial carbon dioxide tension	40 mmHg
Mixed venous carbon dioxide tension	45 mmHg
Arterial pH	7.38
Mixed venous pH	7.35
Arterial bicarbonate	24 mmol/L
Mixed venous bicarbonate	26 mmol/L
Arterial lactate	1.0 mmol/L
Mixed venous lactate	2.0 mmol/L
Arterial glucose	100 mg/dL
Mixed venous glucose	80 mg/dL
Arterial urea nitrogen	10 mg/dL
Mixed venous urea nitrogen	15 mg/dL
Arterial creatinine	1.0 mg/dL
Mixed venous creatinine	1.2 mg/dL
Arterial ammonia	10 mmol/L
Mixed venous ammonia	15 mmol/L
Arterial ketone bodies	0.5 mmol/L
Mixed venous ketone bodies	1.0 mmol/L
Arterial free fatty acids	0.5 mmol/L
Mixed venous free fatty acids	1.0 mmol/L
Arterial triglycerides	100 mg/dL
Mixed venous triglycerides	150 mg/dL
Arterial cholesterol	200 mg/dL
Mixed venous cholesterol	250 mg/dL
Arterial HDL	50 mg/dL
Mixed venous HDL	60 mg/dL
Arterial LDL	130 mg/dL
Mixed venous LDL	150 mg/dL
Arterial VLDL	20 mg/dL
Mixed venous VLDL	30 mg/dL
Arterial lipoprotein(a)	30 mg/dL
Mixed venous lipoprotein(a)	40 mg/dL
Arterial homocysteine	10 mmol/L
Mixed venous homocysteine	15 mmol/L
Arterial folic acid	10 nmol/L
Mixed venous folic acid	15 nmol/L
Arterial vitamin B12	100 pmol/L
Mixed venous vitamin B12	150 pmol/L
Arterial vitamin C	100 mg/dL
Mixed venous vitamin C	150 mg/dL
Arterial vitamin E	100 mg/dL
Mixed venous vitamin E	150 mg/dL
Arterial vitamin K	100 mg/dL
Mixed venous vitamin K	150 mg/dL
Arterial vitamin D	100 mg/dL
Mixed venous vitamin D	150 mg/dL
Arterial vitamin A	100 mg/dL
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